EVALUATION OF ANTIHYPERGLYCEMIC EFFECT OF ALOE VERA GEL EXTRACT IN NORMAL RATS AND STREPTOZOTOCIN INDUCED DIABETIC RATS

ABSTRACT

AIM The aim is to evaluate the antihyperglycemic effect of aloe vera gel extract in normal rats and streptozotocin induced diabetic rats by tail puncture method. **METHODS** 24 adult male albino rats weighing 150-200g were selected from central animal house, Madurai Medical College, Madurai. Initially, 18 animals will be divided into 3 groups of 6 animals each. Group I received normal feed, Group II and Group III received aloe vera gel extract 200mg/kg and 400mg/kg orally for 14days.After washout period of one month, 24 albino rats will be divided into 4 groups of 6 animals each. Group I received normal feed. Group II received Tab. Glibenclamide1mg/kg orally. Group III and Group IV received aloe vera gel extract 200mg/kg and 400mg/kg orally for 14days.The blood glucose level was monitored on day 1, 7 and 14 by tail vene puncture method **RESULTS** Aloe vera gel extract of 200mg/kg and 400mg/kg did not produce hypoglycemic effect on day 1, day 7 and day 14 in normal rats. The antihyperglycemic effect of standard drug is highly significant ($p < 0.001$) & aloe vera gel 200mg/kg and 400mg/kg shown significant antihyperglycemic effect when compared with control group ($p < 0.05$).The percentage fall in blood glucose levels with standard was 64.1% and aloe vera gel 400mg/kg treated group was 24.6% when compared with control group. **CONCLUSION** Aloe vera gel extract 200 mg/kg and 400 mg/kg produce significant reduction in blood glucose level in streptozotocin induced diabetic rats when compared with control group but not in normal rats.

KEY WORDS Aloe vera gel, Glibenclamide, antihyperglycemic, tail vene puncture.